

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Richard HOLZMANN

Title: SYSTEM AND METHOD FOR MONITORING AND NON-DISRUPTIVE BACKUP OF DATA IN A SOLID STATE DISK SYSTEM

App. No.: 10/697,590 Filed: October 30, 2003

Examiner: Jae Un YU Group Art Unit: 2185

Customer No.: 34456 Confirmation No.: 8309

Atty. Dkt. No.: 1117.0001 (TMS-0001)

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Mail Stop AF  
Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

**REMARKS IN SUPPORT OF  
THE PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Dear Sir:

In response to the Final Office Action mailed August 17, 2006 (hereinafter, "the Final Action"), and pursuant to the Notice of Appeal and Pre-Appeal Brief Request for Review submitted herewith, the Applicants request review of the following issues on appeal.

***The cited art fails to disclose the recited elements of "a segment queue stored by a control module for storing a list of data segments that have been updated in a memory module" and "said control module, when a time interval expires, copying the data segments listed in said segment queue to said non-volatile storage media" as recited by claim 1***

Claim 1 recites a segment queue stored by a control module for storing a list of data segments that have been updated in a memory module. Claim 1 also recites said control module, when a time interval expires, copying the data segments listed in said segment queue to said non-volatile storage media. These elements are not disclosed or suggested by either of the cited references (Schaffer et al. (US 5,524,190) and Young (US 6,898,681 B2)). Schaeffer discloses a system for automatically saving changes to a document as they occur. *Schaeffer*, Abstract. To record changes to a document "each time a user makes a change to a document, copy of the

command object that represents the change is placed onto the end of a queue.” *Id.*, column 5, lines 53-55. In addition, a log of the command objects is copied from the queue to a non-volatile storage medium. *Id.*, col. 6, lines 7-10.

According to the Final Action at page 3, the changes to a document as taught by Schaeffer correspond to the claimed “data segments”, and the command objects as taught by Schaeffer correspond to the claimed segment queue. Further, the Final Action asserts that the copying of the command objects from the queue to a non-volatile storage media as taught by Schaeffer corresponds to the claimed copying of data segments listed in the segment queue to a non-volatile storage media. However, assuming *arguendo* that the Final Action’s characterization of the “data segments” and the “segment queue” are accurate, then the copying of the command objects to the non-volatile media does not correspond to copying data segments **listed in** the segment queue to a non-volatile storage media. Instead, copying of the command objects to the non-volatile media would correspond to copying the **segment queue itself** to the non-volatile storage media. Accordingly, Schaeffer does not disclose copying **data segments** listed in a segment queue to a non-volatile storage media, as recited in claim 1. Instead, Schaeffer discloses copying **command objects** to a non-volatile storage media. Further, Young does not remedy the deficiency of Schaeffer. Accordingly, Schaeffer fails to disclose or suggest each and every element of claim 1.

***There is no motivation to combine the cited references of Schaeffer, Young, and Yan***

There is no motivation to combine the Young and Schaeffer references. Schaeffer is directed towards “a system and method for automatically saving a document” from **RAM to a hard disc**. *Id.*, col. 1, lines 48-50 (emphasis added). Young, in contrast, is directed to creating a backup of an **entire hard disc volume**. There is no suggestion in either reference that the document backup system of Schaeffer should be combined with a hard disc volume backup system such as the system of Young. Further, one of skill in the art would not be motivated to combine the references because they are directed to nonanalogous art. Applicant submits that automatic backup of an individual document being accessed by a user and backup of entire hard disc volumes are not analogous problems, and one of skill in the art would not be motivated to combine Young and Schaeffer.

***There is no motivation to combine the cited references of Schaeffer, Young, and Yan***

At pages 7-8 of the Office Action, claims 3 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Schaffer et al. and Young as applied to claims 1 and 12 above, and further in view of Yan et al. (US 2004/0103438 A1). There is no motivation to combine Schaeffer, Young, and Yan. As explained above, Schaeffer is directed to automatic saving of documents, while Young is directed to backup of hard disc volumes. Yan is directed to “methods and systems for transferring an event from a server to a client.” Yan, [006]. There is no suggestion in any of the references that the document backup system of Schaeffer should be combined with a hard disc volume backup system such as the system of Young and with a system for transferring an event from a server to a client, such as the system of Yan. Further, one of skill in the art would not be motivated to combine the references because they are directed to nonanalogous art. Applicant submits that automatic backup of an individual document being accessed by a user, backup of entire hard disc volumes, and transferring an event from a server to a client are not analogous problems, and one of skill in the art would not be motivated to combine the references.

***There is no motivation to combine the cited references of Schaeffer, Young, and Yanai***

There is no motivation to combine Schaeffer, Young, and Yanai because they are directed to non-analogous art. As explained above, Schaeffer is directed to automatic saving of documents, while Young is directed to backup of hard disc volumes. Yanai is directed to “a reliable disk storage system with write preservation, for assuring completion of data writes to a storage disk upon failure of main electrical power.” Yanai, col. 1, lines 61-64. There is no suggestion in any of the references that the document backup system of Schaeffer should be combined with a hard disc volume backup system such as the system of Young and with a system for assuring completion of data writes to a storage disk upon failure of main electrical power, such as the system of Yanai. Further, one of skill in the art would not be motivated to combine the references because they are directed to nonanalogous art. Applicant submits that automatic backup of an individual document being accessed by a user, backup of entire hard disc volumes, and assuring completion of data writes to a storage disk upon failure of main electrical power are not analogous problems, and one of skill in the art would not be motivated to combine the references.

***There is no motivation to combine the cited references of Schaeffer, Young, and Gittins***

At page 11 of the Office Action, claims 7 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Schaffer et al. and Young as applied to claims 1 and 12 above, and further in view of Gittins et al. (US 6,961,651). There is no motivation to combine Schaeffer, Young, and Gittins because they are directed to non-analogous art. As explained above, Schaeffer is directed to automatic saving of documents, while Young is directed to backup of hard disc volumes. Gittins is directed to a method for “notifying an application program of a change of state in the storage devices of a computing system.” *Gittins*, col. 2, lines 10-12. There is no suggestion in any of the references that the document backup system of Schaeffer should be combined with a hard disc volume backup system such as the system of Young and with a method for notifying an application program of a change of state in the storage devices of a computing system, such as the method of Gittins. Further, one of skill in the art would not be motivated to combine the references because they are directed to nonanalogous art. Applicant submits that automatic backup of an individual document being accessed by a user, backup of entire hard disc volumes, and notifying an application program of a change of state in the storage devices of a computing system are not analogous problems, and one of skill in the art would not be motivated to combine the references.

***The cited references do not disclose the recited elements of “wherein the segment queue is manipulated by a user to customize the priorities of the data segments listed in said queue” as recited by claims 8 and 9***

Claim 8 recites “wherein said segment queue is manipulated by a user to customize the priorities of the data segments listed in said queue.” This element is not disclosed or suggested by the cited references. Applicant respectfully traverses the Final Action’s assertion that this element is disclosed by Baber. Baber discloses “[a]n interface may be provided whereby a human user can request that messages from a server be delivered in some different order than the server has queued them for transmission.” *Baber*, col. 9, lines 43-46. Baber does not disclose organization of a segment queue that stores a list of data segments that have been updated in memory, as recited in claim 8. Instead Baber discloses a queue of messages from a server. Further, Baber discloses only that messages may be delivered in a different order than they are listed in a queue. In contrast, claim 8 recites manipulating the segment queue itself to customize the priorities of the data segments.

Further, there is no motivation to combine Schaeffer, Young, and Baber because they are directed to non-analogous art. As explained above, Schaeffer is directed to automatic saving of documents, while Young is directed to backup of hard disc volumes. Baber is directed to “a technique with which sending applications or receiving applications...can change transmission priorities of in-transit messages dynamically.” *Baber*, col. 4, lines 16-19. There is no suggestion in any of the references that the document backup system of Schaeffer should be combined with a hard disc volume backup system such as the system of Young and with a technique for changing transmission priorities of in-transit messages dynamically, such as the method of Baber. Further, one of skill in the art would not be motivated to combine the references because they are directed to nonanalogous art. Applicant submits that automatic backup of an individual document being accessed by a user, backup of entire hard disc volumes, and changing transmission priorities of in-transit messages dynamically are not analogous problems, and one of skill in the art would not be motivated to combine the references.

### ***Conclusion***

The Applicant respectfully submits that the present application is in condition for allowance, and an early indication of the same is courteously solicited. The Applicant believes no additional fees are due, but if the Commissioner believes additional fees are due, the Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-3797.

Respectfully submitted,

/Adam D. Sheehan/

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November 17, 2006

Date